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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/559,839 | 12/08/2005 | Johannes Willem Hofstraat | NL030734 | 9595 |

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BRIARCLIFF MANOR, NY 10510

EXAMINER

NELSON, MICHAEL E

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

05/14/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/559,839

Applicant(s)

HOFSTRAAT ET AL.

Examiner

MICHAEL E. NELSON

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/88)
Paper No(s)/Mail Date 12/08/2005, 1/22/2007
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 3 recites the broad recitation "at least 3" and the claim also recites "preferably at least 4" which is the narrower statement of the range/limitation.

Claim Rejections - 35 USC § 102

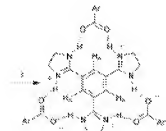
4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Osterod et al. (Journal of Materials Chemistry, vol. 11, pp. 1625-1633, 2001).

6. Concerning claims 1 and 7, Osterod et al. describe systems for use in electrical and optical devices comprising two organic moieties having conjugated unsaturated bonds, where one moiety serves as an H-bond donor which has more than two hydrogen bonding clusters, where each cluster forms at least two hydrogen bonds, and at least 2 (in this case 3) hydrogen bond acceptors, which each have one hydrogen bonding cluster, each of which forms 2 hydrogen bonds. The structure of the hydrogen bonded complex is shown below. (Scheme 2, or scheme 3, page 1627) The hydrogen bond donor is bonded to a backbone having a plurality of hydrogen bonding clusters (per claim 7), specifically a benzene backbone with three imidazole clusters.



7. Concerning claim 2, in each case, the hydrogen bond is an N-H-O bond.

8. Concerning claim 3, each complex shown above comprises a hydrogen donor and 3 hydrogen acceptors. The system could reasonably be interpreted to include a multitude (i.e. more than 2) of the hydrogen donor molecules, since a single molecule is impossible to isolate, accompanied by 3 times as many acceptor molecules.
9. Concerning claim 4 and 8, Osterod et al. disclose that the materials have a known propensity for high luminescence or charge transport mobility. (page 1626)
10. Concerning claim 5, Osterod et al. disclose that the complexes showed blue fluorescence, except for the cyanosubstituted complex which gave a predictable blue-green fluorescence, indicating that the luminescence is due to the stilbene portion of the complex, which is therefore has the lowest energy state (page 1629, last paragraph).
11. Concerning claim 6, Osterod et al. disclose that the compounds individually are dissolved in Ethanol and a small amount of CHCl_3 to form the complex, indicating that the two molecules are soluble in a solvent. (page 1632) Furthermore, the complex 14b was soluble in Chloroform. (page 1630).
12. Concerning claim 9-10, Osterod et al. disclose the use of the materials in an electroluminescent device (per claim 10) comprising a pair of electrodes with the complex formed between them. (page 1630)

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Basca et al. (Journal of Applied Physics) describes mixtures of materials used in electroluminescence devices, but does describe hydrogen bonds between the two components, but only a single component. Jung et al. (Synthetic Metals) describes a hydrogen bonding polymer, and an interaction with a second material but does not describe the nature of the bonding between the two components.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL E. NELSON whose telephone number is (571)270-3453. The examiner can normally be reached on M-F 7:30am-5:00pm EST (First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael E. Nelson
Examiner
Art Unit 1794

/Callie E. Shosho/

Supervisory Patent Examiner, Art Unit 1794